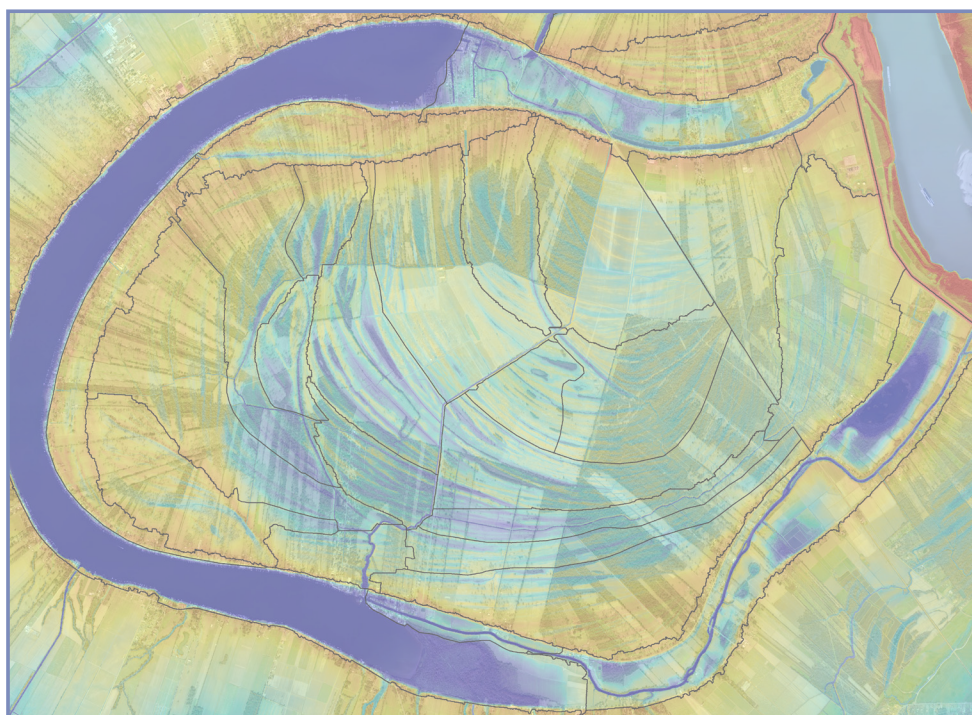


APPENDIX B: TIME OF CONCENTRATION SHEETS



Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ C-01
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

Segment ID	A	n/a	
1. Surface Description (Table 3-1)	Light Underbrush		
2. Manning's roughness coeff., n (Table 3-1)	0.400		
3. Flow length, L (total L ≤ 300 ft) ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂ in.	4.80		
5. Land Slope, s ft. / ft.	0.02704		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr	0.624	+	0.000 = 0.624 hrs.
			= 37.42 minutes

Shallow concentrated flow

Segment ID	B	n/a	
7. Surface description (paved or unpaved).....	Unpaved		
8. Flow length, L ft.	1,146.5		
9. Watercourse slope, s ft. / ft.	0.01009		
10. Average velocity, V (figure 3-1) ft. / s	1.621		
11. T _t = $\frac{L}{3600 V}$ hr	0.197	+	0.000 = 0.197 hrs.
			= 11.79 minutes

Channel flow

Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²	1,433.2		
13. Wetted perimeter, P _w ft.	145.1		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.	9.9		
15. Channel slope, s ft. / ft.	0.00010		
16. Manning's roughness coeff., n	0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.	1.959		
18. Flow length, L ft.	8,692.0		
19. T _t = $\frac{L}{3600 V}$ hr	1.232	+	0.000 = 1.232 hrs
			= 73.93 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)	2.052		hrs
	123.15		minutes
Value used for Analysis (Minimum T _c 0.10 hours).....	2.05		hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ C-02
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Light Underbrush		
2. Manning's roughness coeff., n (Table 3-1)		0.400		
3. Flow length, L (total L ≤ 300 ft)	ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂	in.	4.80		
5. Land Slope, s	ft. / ft.	0.00287		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$	hr	1.530	+	0.000 = 1.530 hrs.
				= 91.80 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft.	4,292.7		
9. Watercourse slope, s	ft. / ft.	0.00353		
10. Average velocity, V (figure 3-1)	ft. / s	0.958		
11. T _t = $\frac{L}{3600 V}$	hr	1.245	+	0.000 = 1.245 hrs.
				= 74.68 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a	ft ²	1,113.7		
13. Wetted perimeter, P _w	ft.	134.4		
14. Hydraulic radius, r = $\frac{a}{P_w}$	ft.	8.3		
15. Channel slope, s	ft. / ft.	0.00016		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$	ft. / s.	2.192		
18. Flow length, L	ft.	32,441.3		
19. T _t = $\frac{L}{3600 V}$	hr	4.112	+	0.000 = 4.112 hrs
				= 246.70 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		6.886		hrs
		413.17		minutes
Value used for Analysis (Minimum T _c 0.10 hours)		6.89		hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____
E-01
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a		
1. Surface Description (Table 3-1)		Light Underbrush			
2. Manning's roughness coeff., n (Table 3-1)		0.400			
3. Flow length, L (total L ≤ 300 ft) ft.		300.0			
4. Two-yr 24-hr rainfall, P ₂ in.		4.80			
5. Land Slope, s ft. / ft.		0.00160			
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		1.933	+	0.000	= 1.933 hrs.
					= 115.96 minutes

Shallow concentrated flow

	Segment ID	B	n/a		
7. Surface description (paved or unpaved).....		Unpaved			
8. Flow length, L ft.		248.9			
9. Watercourse slope, s ft. / ft.		0.00113			
10. Average velocity, V (figure 3-1) ft. / s		0.543			
11. T _t = $\frac{L}{3600 V}$ hr		0.127	+	0.000	= 0.127 hrs.
					= 7.64 minutes

Channel flow

	Segment ID	C	n/a		
12. Cross sectional flow area, a ft ²		294.3			
13. Wetted perimeter, P _w ft.		58.2			
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		5.1			
15. Channel slope, s ft. / ft.		0.00062			
16. Manning's roughness coeff., n		0.035			
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		3.127			
18. Flow length, L ft.		17,533.5			
19. T _t = $\frac{L}{3600 V}$ hr		1.558	+	0.000	= 1.558 hrs
					= 93.46 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)				3.618	hrs
				217.06	minutes
Value used for Analysis (Minimum T _c 0.10 hours).....				3.62	hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____

E-02
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a		
1. Surface Description (Table 3-1)		Cultivated Soil			
2. Manning's roughness coeff., n (Table 3-1)		0.170			
3. Flow length, L (total L ≤ 300 ft) ft.		300.0			
4. Two-yr 24-hr rainfall, P ₂ in.		4.80			
5. Land Slope, s ft. / ft.		0.00209			
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.877	+	0.000	= 0.877 hrs.
					= 52.60 minutes

Shallow concentrated flow

	Segment ID	B	n/a		
7. Surface description (paved or unpaved).....		Unpaved			
8. Flow length, L ft.		15,661.1			
9. Watercourse slope, s ft. / ft.		0.00078			
10. Average velocity, V (figure 3-1) ft. / s		0.451			
11. T _t = $\frac{L}{3600 V}$ hr		9.654	+	0.000	= 9.654 hrs.
					= 579.25 minutes

Channel flow

	Segment ID	n/a	n/a		
12. Cross sectional flow area, a ft ²		0.0			
13. Wetted perimeter, P _w ft.		0.0			
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.					
15. Channel slope, s ft. / ft.		0.00010			
16. Manning's roughness coeff., n					
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.					
18. Flow length, L ft.		0.0			
19. T _t = $\frac{L}{3600 V}$ hr		0.000	+	0.000	= 0.000 hrs
					= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		10.531			hrs
		631.85			minutes
Value used for Analysis (Minimum T _c 0.10 hours).....		10.53			hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ E-03
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Cultivated Soil		
2. Manning's roughness coeff., n (Table 3-1)		0.170		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00505		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.616	+	0.000 = 0.616 hrs.
				= 36.93 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		8,045.8		
9. Watercourse slope, s ft. / ft.		0.00083		
10. Average velocity, V (figure 3-1) ft. / s		0.465		
11. T _t = $\frac{L}{3600 V}$ hr		4.805	+	0.000 = 4.805 hrs.
				= 288.31 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		253.3		
13. Wetted perimeter, P _w ft.		54.4		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		4.7		
15. Channel slope, s ft. / ft.		0.00010		
16. Manning's roughness coeff., n		0.040		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		1.039		
18. Flow length, L ft.		9,219.8		
19. T _t = $\frac{L}{3600 V}$ hr		2.464	+	0.000 = 2.464 hrs
				= 147.85 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)				7.885 hrs
				473.10 minutes
Value used for Analysis (Minimum T _c 0.10 hours).....				7.88 hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ E-04
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Cultivated Soil		
2. Manning's roughness coeff., n (Table 3-1)		0.170		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00049		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		1.570	+	0.000 = 1.570 hrs.
				= 94.20 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		4,027.6		
9. Watercourse slope, s ft. / ft.		0.00105		
10. Average velocity, V (figure 3-1) ft. / s		0.522		
11. T _t = $\frac{L}{3600 V}$ hr		2.142	+	0.000 = 2.142 hrs.
				= 128.52 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		253.3		
13. Wetted perimeter, P _w ft.		54.4		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		4.7		
15. Channel slope, s ft. / ft.		0.00372		
16. Manning's roughness coeff., n		0.040		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		6.336		
18. Flow length, L ft.		829.3		
19. T _t = $\frac{L}{3600 V}$ hr		0.036	+	0.000 = 0.036 hrs
				= 2.18 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)				3.748 hrs
				224.90 minutes
Value used for Analysis (Minimum T _c 0.10 hours).....				3.75 hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (Tc) or travel time (Tt)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____

FR-01
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Smooth Surface		
2. Manning's roughness coeff., n (Table 3-1)		0.011		
3. Flow length, L (total $L \leq 300$ ft) ft.		0.0		
4. Two-yr 24-hr rainfall, P_2 in.		4.80		
5. Land Slope, s ft. / ft.		0.00010		
6. $T_t = \frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.000	+ 0.000	= 0.000 hrs.
				= 0.00 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L ft.		0.0		
9. Watercourse slope, s ft. / ft.		0.00010		
10. Average velocity, V (figure 3-1) ft. / s		0.161		
11. $T_t = \frac{L}{3600 V}$ hr		0.000	+ 0.000	= 0.000 hrs.
				= 0.00 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²		0.0		
13. Wetted perimeter, P_w ft.		0.0		
14. Hydraulic radius, $r = \frac{a}{P_w}$ ft.				
15. Channel slope, s ft. / ft.		0.00010		
16. Manning's roughness coeff., n		0.040		
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.				
18. Flow length, L ft.		0.0		
19. $T_t = \frac{L}{3600 V}$ hr		0.000	+ 0.000	= 0.000 hrs
				= 0.00 minutes
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, and 19)		0.000		hrs
		0.00		minutes
Value used for Analysis (Minimum T_c 0.10 hours)		0.10		hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____

FR-02
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a		
1. Surface Description (Table 3-1)		Grass			
2. Manning's roughness coeff., n (Table 3-1)		0.150			
3. Flow length, L (total L ≤ 300 ft) ft.		300.0			
4. Two-yr 24-hr rainfall, P ₂ in.		4.80			
5. Land Slope, s ft. / ft.		0.00284			
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.701	+	0.000	= 0.701 hrs.
					= 42.07 minutes

Shallow concentrated flow

	Segment ID	B	n/a		
7. Surface description (paved or unpaved).....		Unpaved			
8. Flow length, L ft.		16,626.8			
9. Watercourse slope, s ft. / ft.		0.00056			
10. Average velocity, V (figure 3-1) ft. / s		0.383			
11. T _t = $\frac{L}{3600 V}$ hr		12.053	+	0.000	= 12.053 hrs.
					= 723.21 minutes

Channel flow

	Segment ID	n/a	n/a		
12. Cross sectional flow area, a ft ²		0.0			
13. Wetted perimeter, P _w ft.		0.0			
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.					
15. Channel slope, s ft. / ft.		0.00010			
16. Manning's roughness coeff., n		0.040			
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.					
18. Flow length, L ft.		0.0			
19. T _t = $\frac{L}{3600 V}$ hr		0.000	+	0.000	= 0.000 hrs
					= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		12.755			hrs
		765.28			minutes
Value used for Analysis (Minimum T _c 0.10 hours).....		12.75			hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____

FR-03
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00243		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.746	+	0.000
			=	0.746 hrs.
			=	44.74 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		5,907.8		
9. Watercourse slope, s ft. / ft.		0.00181		
10. Average velocity, V (figure 3-1) ft. / s		0.687		
11. T _t = $\frac{L}{3600 V}$ hr		2.389	+	0.000
			=	2.389 hrs.
			=	143.33 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²		0.0		
13. Wetted perimeter, P _w ft.		0.0		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.				
15. Channel slope, s ft. / ft.		0.00010		
16. Manning's roughness coeff., n		0.040		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.				
18. Flow length, L ft.		0.0		
19. T _t = $\frac{L}{3600 V}$ hr		0.000	+	0.000
			=	0.000 hrs
			=	0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		3.134	hrs	
		188.06	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....		3.13	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M1-01
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00300		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.686	+	0.000 = 0.686 hrs.
				= 41.15 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		4,641.2		
9. Watercourse slope, s ft. / ft.		0.00279		
10. Average velocity, V (figure 3-1) ft. / s		0.852		
11. T _t = $\frac{L}{3600 V}$ hr		1.513	+	0.000 = 1.513 hrs.
				= 90.78 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		673.8		
13. Wetted perimeter, P _w ft.		95.9		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		7.0		
15. Channel slope, s ft. / ft.		0.00046		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		3.335		
18. Flow length, L ft.		2,458.6		
19. T _t = $\frac{L}{3600 V}$ hr		0.205	+	0.000 = 0.205 hrs
				= 12.29 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		2.404	hrs	
		144.22	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....		2.40	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____
 Check One: Present X Developed _____ M1-02
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

Segment ID	A	n/a	
1. Surface Description (Table 3-1)	Light Underbrush		
2. Manning's roughness coeff., n (Table 3-1)	0.400		
3. Flow length, L (total L ≤ 300 ft) ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂ in.	4.80		
5. Land Slope, s ft. / ft.	0.02128		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr	0.686	+	0.000 = 0.686 hrs.
			= 41.19 minutes

Shallow concentrated flow

Segment ID	B	n/a	
7. Surface description (paved or unpaved).....	Unpaved		
8. Flow length, L ft.	23,774.3		
9. Watercourse slope, s ft. / ft.	0.00022		
10. Average velocity, V (figure 3-1) ft. / s	0.238		
11. T _t = $\frac{L}{3600 V}$ hr	27.786	+	0.000 = 27.786 hrs.
			= 1667.13 minutes

Channel flow

Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²	0.0		
13. Wetted perimeter, P _w ft.	0.0		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.			
15. Channel slope, s ft. / ft.	0.00010		
16. Manning's roughness coeff., n			
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.			
18. Flow length, L ft.	0.0		
19. T _t = $\frac{L}{3600 V}$ hr	0.000	+	0.000 = 0.000 hrs
			= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)	28.472	hrs	
	1708.32	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....	28.47	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M1-03
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

Segment ID	A	n/a	
1. Surface Description (Table 3-1)	Light Underbrush		
2. Manning's roughness coeff., n (Table 3-1)	0.400		
3. Flow length, L (total L ≤ 300 ft) ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂ in.	4.80		
5. Land Slope, s ft. / ft.	0.01222		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr	0.857	+	0.000 = 0.857 hrs.
			= 51.43 minutes

Shallow concentrated flow

Segment ID	B	n/a	
7. Surface description (paved or unpaved).....	Unpaved		
8. Flow length, L ft.	20,728.1		
9. Watercourse slope, s ft. / ft.	0.00013		
10. Average velocity, V (figure 3-1) ft. / s	0.185		
11. T _t = $\frac{L}{3600 V}$ hr	31.061	+	0.000 = 31.061 hrs.
			= 1863.66 minutes

Channel flow

Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²	0.0		
13. Wetted perimeter, P _w ft.	0.0		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.			
15. Channel slope, s ft. / ft.	0.00010		
16. Manning's roughness coeff., n			
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.			
18. Flow length, L ft.	0.0		
19. T _t = $\frac{L}{3600 V}$ hr	0.000	+	0.000 = 0.000 hrs
			= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)	31.918	hrs	
	1915.08	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....	31.92	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M1-04
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00291		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.694	+	0.000 = 0.694 hrs.
				= 41.65 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		7,899.7		
9. Watercourse slope, s ft. / ft.		0.00155		
10. Average velocity, V (figure 3-1) ft. / s		0.635		
11. T _t = $\frac{L}{3600 V}$ hr		3.453	+	0.000 = 3.453 hrs.
				= 207.20 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		592.4		
13. Wetted perimeter, P _w ft.		85.3		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		6.9		
15. Channel slope, s ft. / ft.		0.00010		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		1.550		
18. Flow length, L ft.		3,334.1		
19. T _t = $\frac{L}{3600 V}$ hr		0.598	+	0.000 = 0.598 hrs
				= 35.86 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)				4.745 hrs
				284.72 minutes
Value used for Analysis (Minimum T _c 0.10 hours).....				4.75 hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____
 Check One: Present X Developed _____ M1-05
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft)	ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂	in.	4.80		
5. Land Slope, s	ft. / ft.	0.01687		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$	hr	0.344	+	0.000 = 0.344 hrs.
				= 20.62 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft.	18,936.3		
9. Watercourse slope, s	ft. / ft.	0.00030		
10. Average velocity, V (figure 3-1)	ft. / s	0.279		
11. T _t = $\frac{L}{3600 V}$	hr	18.885	+	0.000 = 18.885 hrs.
				= 1133.13 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a	ft ²	0.0		
13. Wetted perimeter, P _w	ft.	0.0		
14. Hydraulic radius, r = $\frac{a}{P_w}$	ft.			
15. Channel slope, s	ft. / ft.	0.00010		
16. Manning's roughness coeff., n				
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$	ft. / s.			
18. Flow length, L	ft.	0.0		
19. T _t = $\frac{L}{3600 V}$	hr	0.000	+	0.000 = 0.000 hrs
				= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		19.229	hrs	
		1153.75	minutes	
Value used for Analysis (Minimum T _c 0.10 hours)		19.23	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____

M1-06
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00431		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.593	+	0.000
			=	0.593 hrs.
			=	35.60 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		13,890.0		
9. Watercourse slope, s ft. / ft.		0.00130		
10. Average velocity, V (figure 3-1) ft. / s		0.581		
11. T _t = $\frac{L}{3600 V}$ hr		6.638	+	0.000
			=	6.638 hrs.
			=	398.25 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		425.2		
13. Wetted perimeter, P _w ft.		71.7		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		5.9		
15. Channel slope, s ft. / ft.		0.00034		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		2.564		
18. Flow length, L ft.		2,459.3		
19. T _t = $\frac{L}{3600 V}$ hr		0.266	+	0.000
			=	0.266 hrs
			=	15.98 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		7.497	hrs	
		449.84	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....		7.50	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____

M1-07
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00235		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.756	+	0.000 = 0.756 hrs.
				= 45.39 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		11,053.5		
9. Watercourse slope, s ft. / ft.		0.00144		
10. Average velocity, V (figure 3-1) ft. / s		0.612		
11. T _t = $\frac{L}{3600 V}$ hr		5.017	+	0.000 = 5.017 hrs.
				= 301.00 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		468.9		
13. Wetted perimeter, P _w ft.		75.1		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		6.2		
15. Channel slope, s ft. / ft.		0.00010		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		1.443		
18. Flow length, L ft.		4,698.8		
19. T _t = $\frac{L}{3600 V}$ hr		0.904	+	0.000 = 0.904 hrs
				= 54.25 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		6.677		hrs
		400.64		minutes
Value used for Analysis (Minimum T _c 0.10 hours).....		6.68		hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____
 Check One: Present X Developed _____ M1-08
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Cultivated Soil		
2. Manning's roughness coeff., n (Table 3-1)		0.170		
3. Flow length, L (total L ≤ 300 ft)	ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂	in.	4.80		
5. Land Slope, s	ft. / ft.	0.00103		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$	hr	1.164	+	0.000 = 1.164 hrs.
				= 69.86 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft.	4,508.1		
9. Watercourse slope, s	ft. / ft.	0.00010		
10. Average velocity, V (figure 3-1)	ft. / s	0.161		
11. T _t = $\frac{L}{3600 V}$	hr	7.761	+	0.000 = 7.761 hrs.
				= 465.68 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a	ft ²	0.0		
13. Wetted perimeter, P _w	ft.	0.0		
14. Hydraulic radius, r = $\frac{a}{P_w}$	ft.			
15. Channel slope, s	ft. / ft.	0.00010		
16. Manning's roughness coeff., n				
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$	ft. / s.			
18. Flow length, L	ft.	0.0		
19. T _t = $\frac{L}{3600 V}$	hr	0.000	+	0.000 = 0.000 hrs
				= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		8.926	hrs	
		535.54	minutes	
Value used for Analysis (Minimum T _c 0.10 hours)		8.93	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____
 Check One: Present X Developed _____ M1-09
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00214		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.786	+	0.000 = 0.786 hrs.
				= 47.14 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		10,392.0		
9. Watercourse slope, s ft. / ft.		0.00156		
10. Average velocity, V (figure 3-1) ft. / s		0.636		
11. T _t = $\frac{L}{3600 V}$ hr		4.537	+	0.000 = 4.537 hrs.
				= 272.23 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²		0.0		
13. Wetted perimeter, P _w ft.		0.0		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.				
15. Channel slope, s ft. / ft.		0.00010		
16. Manning's roughness coeff., n				
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.				
18. Flow length, L ft.		0.0		
19. T _t = $\frac{L}{3600 V}$ hr		0.000	+	0.000 = 0.000 hrs
				= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)				5.323 hrs
				319.36 minutes
Value used for Analysis (Minimum T _c 0.10 hours).....				5.32 hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M1-10
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

Segment ID	A	n/a	
1. Surface Description (Table 3-1)	Light Underbrush		
2. Manning's roughness coeff., n (Table 3-1)	0.400		
3. Flow length, L (total L ≤ 300 ft) ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂ in.	4.80		
5. Land Slope, s ft. / ft.	0.00741		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr	1.047	+	0.000 = 1.047 hrs.
			= 62.80 minutes

Shallow concentrated flow

Segment ID	B	n/a	
7. Surface description (paved or unpaved).....	Unpaved		
8. Flow length, L ft.	11,893.2		
9. Watercourse slope, s ft. / ft.	0.00071		
10. Average velocity, V (figure 3-1) ft. / s	0.430		
11. T _t = $\frac{L}{3600 V}$ hr	7.679	+	0.000 = 7.679 hrs.
			= 460.74 minutes

Channel flow

Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²	0.0		
13. Wetted perimeter, P _w ft.	0.0		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.			
15. Channel slope, s ft. / ft.	0.00010		
16. Manning's roughness coeff., n			
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.			
18. Flow length, L ft.	0.0		
19. T _t = $\frac{L}{3600 V}$ hr	0.000	+	0.000 = 0.000 hrs
			= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)	8.726	hrs	
	523.54	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....	8.73	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M1-11
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft)	ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂	in.	4.80		
5. Land Slope, s	ft. / ft.	0.00439		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$	hr	0.589	+	0.000 = 0.589 hrs.
				= 35.33 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft.	5,177.4		
9. Watercourse slope, s	ft. / ft.	0.00249		
10. Average velocity, V (figure 3-1)	ft. / s	0.805		
11. T _t = $\frac{L}{3600 V}$	hr	1.787	+	0.000 = 1.787 hrs.
				= 107.24 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a	ft ²	608.3		
13. Wetted perimeter, P _w	ft.	83.7		
14. Hydraulic radius, r = $\frac{a}{P_w}$	ft.	7.3		
15. Channel slope, s	ft. / ft.	0.00011		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$	ft. / s.	1.691		
18. Flow length, L	ft.	6,380.3		
19. T _t = $\frac{L}{3600 V}$	hr	1.048	+	0.000 = 1.048 hrs
				= 62.90 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		3.425	hrs	
		205.47	minutes	
Value used for Analysis (Minimum T _c 0.10 hours)		3.42	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M2-01
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00439		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.589	+	0.000 = 0.589 hrs.
				= 35.33 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		5,177.4		
9. Watercourse slope, s ft. / ft.		0.00249		
10. Average velocity, V (figure 3-1) ft. / s		0.805		
11. T _t = $\frac{L}{3600 V}$ hr		1.787	+	0.000 = 1.787 hrs.
				= 107.24 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		608.3		
13. Wetted perimeter, P _w ft.		83.7		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		7.3		
15. Channel slope, s ft. / ft.		0.00011		
16. Manning's roughness coeff., n ft. / s.		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		1.691		
18. Flow length, L ft.		6,380.3		
19. T _t = $\frac{L}{3600 V}$ hr		1.048	+	0.000 = 1.048 hrs
				= 62.90 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		3.425	hrs	
		205.47	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....		3.42	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (Tc) or travel time (Tt)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M2-02
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total $L \leq 300$ ft)	ft.	300.0		
4. Two-yr 24-hr rainfall, P_2	in.	4.80		
5. Land Slope, s	ft. / ft.	0.00439		
6. $T_t = \frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$	hr	0.589	+	0.000
			=	0.589 hrs.
			=	35.33 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft.	5,177.4		
9. Watercourse slope, s	ft. / ft.	0.00249		
10. Average velocity, V (figure 3-1)	ft. / s	0.805		
11. $T_t = \frac{L}{3600 V}$	hr	1.787	+	0.000
			=	1.787 hrs.
			=	107.24 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a	ft ²	608.3		
13. Wetted perimeter, P_w	ft.	83.7		
14. Hydraulic radius, $r = \frac{a}{P_w}$	ft.			
15. Channel slope, s	ft. / ft.	0.00011		
16. Manning's roughness coeff., n		0.035		
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$	ft. / s.			
18. Flow length, L	ft.	6,380.3		
19. $T_t = \frac{L}{3600 V}$	hr	0.000	+	0.000
			=	0.000 hrs
			=	0.00 minutes
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, and 19)		2.376	hrs	
		142.57	minutes	
Value used for Analysis (Minimum T_c 0.10 hours)		2.38	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M2-03
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Fallow		
2. Manning's roughness coeff., n (Table 3-1)		0.050		
3. Flow length, L (total L ≤ 300 ft)	ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂	in.	4.80		
5. Land Slope, s	ft. / ft.	0.00439		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$	hr	0.245	+	0.000 = 0.245 hrs.
				= 14.67 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft.	5,177.4		
9. Watercourse slope, s	ft. / ft.	0.00249		
10. Average velocity, V (figure 3-1)	ft. / s	0.805		
11. T _t = $\frac{L}{3600 V}$	hr	1.787	+	0.000 = 1.787 hrs.
				= 107.24 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a	ft ²	608.3		
13. Wetted perimeter, P _w	ft.	83.7		
14. Hydraulic radius, r = $\frac{a}{P_w}$	ft.	7.3		
15. Channel slope, s	ft. / ft.	0.00011		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$	ft. / s.	1.691		
18. Flow length, L	ft.	6,380.3		
19. T _t = $\frac{L}{3600 V}$	hr	1.048	+	0.000 = 1.048 hrs
				= 62.90 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		3.080		hrs
		184.81		minutes
Value used for Analysis (Minimum T _c 0.10 hours)		3.08		hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (Tc) or travel time (Tt)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M2-04
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Cultivated Soil		
2. Manning's roughness coeff., n (Table 3-1)		0.170		
3. Flow length, L (total $L \leq 300$ ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P_2 in.		4.80		
5. Land Slope, s ft. / ft.		0.00439		
6. $T_t = \frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.651	+	0.000
			=	0.651 hrs.
			=	39.05 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		5,177.4		
9. Watercourse slope, s ft. / ft.		0.00249		
10. Average velocity, V (figure 3-1) ft. / s		0.805		
11. $T_t = \frac{L}{3600 V}$ hr		1.787	+	0.000
			=	1.787 hrs.
			=	107.24 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²		608.3		
13. Wetted perimeter, P_w ft.		83.7		
14. Hydraulic radius, $r = \frac{a}{P_w}$ ft.				
15. Channel slope, s ft. / ft.		0.00011		
16. Manning's roughness coeff., n		0.035		
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.				
18. Flow length, L ft.		6,380.3		
19. $T_t = \frac{L}{3600 V}$ hr		0.000	+	0.000
			=	0.000 hrs
			=	0.00 minutes
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, and 19)		2.438	hrs	
		146.30	minutes	
Value used for Analysis (Minimum T_c 0.10 hours).....		2.44	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ M2-05
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Cultivated Soil		
2. Manning's roughness coeff., n (Table 3-1)		0.170		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00439		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.651	+	0.000
			=	0.651 hrs.
			=	39.05 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		5,177.4		
9. Watercourse slope, s ft. / ft.		0.00249		
10. Average velocity, V (figure 3-1) ft. / s		0.805		
11. T _t = $\frac{L}{3600 V}$ hr		1.787	+	0.000
			=	1.787 hrs.
			=	107.24 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²		608.3		
13. Wetted perimeter, P _w ft.		83.7		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.				
15. Channel slope, s ft. / ft.		0.00011		
16. Manning's roughness coeff., n ft. / s.		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.				
18. Flow length, L ft.		6,380.3		
19. T _t = $\frac{L}{3600 V}$ hr		0.000	+	0.000
			=	0.000 hrs
			=	0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		2.438	hrs	
		146.30	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....		2.44	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____

M2-06
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00439		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.589	+	0.000
			=	0.589 hrs.
			=	35.33 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		5,177.4		
9. Watercourse slope, s ft. / ft.		0.00249		
10. Average velocity, V (figure 3-1) ft. / s		0.805		
11. T _t = $\frac{L}{3600 V}$ hr		1.787	+	0.000
			=	1.787 hrs.
			=	107.24 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		608.3		
13. Wetted perimeter, P _w ft.		83.7		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		7.3		
15. Channel slope, s ft. / ft.		0.00011		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		1.691		
18. Flow length, L ft.		6,380.3		
19. T _t = $\frac{L}{3600 V}$ hr		1.048	+	0.000
			=	1.048 hrs
			=	62.90 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		3.425	hrs	
		205.47	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....		3.42	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____
 Check One: T_c X T_t _____

M2-07
Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00439		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.589	+ 0.000	= 0.589 hrs.
				= 35.33 minutes

Shallow concentrated flow

	Segment ID	n/a	n/a	
7. Surface description (paved or unpaved).....				
8. Flow length, L ft.		5,177.4		
9. Watercourse slope, s ft. / ft.		0.00249		
10. Average velocity, V (figure 3-1) ft. / s				
11. T _t = $\frac{L}{3600 V}$ hr		0.000	+ 0.000	= 0.000 hrs.
				= 0.00 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		608.3		
13. Wetted perimeter, P _w ft.		83.7		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		7.3		
15. Channel slope, s ft. / ft.		0.00011		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		1.691		
18. Flow length, L ft.		6,380.3		
19. T _t = $\frac{L}{3600 V}$ hr		1.048	+ 0.000	= 1.048 hrs
				= 62.90 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		1.637		hrs
		98.23		minutes
Value used for Analysis (Minimum T _c 0.10 hours).....		1.64		hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ W-01
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00010		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		2.673	+	0.000 = 2.673 hrs.
				= 160.40 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		14,918.3		
9. Watercourse slope, s ft. / ft.		0.00083		
10. Average velocity, V (figure 3-1) ft. / s		0.466		
11. T _t = $\frac{L}{3600 V}$ hr		8.894	+	0.000 = 8.894 hrs.
				= 533.62 minutes

Channel flow

	Segment ID	n/a	n/a	
12. Cross sectional flow area, a ft ²		0.0		
13. Wetted perimeter, P _w ft.		0.0		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.				
15. Channel slope, s ft. / ft.		0.00010		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.				
18. Flow length, L ft.		0.0		
19. T _t = $\frac{L}{3600 V}$ hr		0.000	+	0.000 = 0.000 hrs
				= 0.00 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		11.567	hrs	
		694.01	minutes	
Value used for Analysis (Minimum T _c 0.10 hours).....		11.57	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (Tc) or travel time (Tt)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ W-02
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Light Underbrush		
2. Manning's roughness coeff., n (Table 3-1)		0.400		
3. Flow length, L (total $L \leq 300$ ft)	ft.	300.0		
4. Two-yr 24-hr rainfall, P_2	in.	4.80		
5. Land Slope, s	ft. / ft.	0.00010		
6. $T_t = \frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$	hr	5.859	+	0.000 = 5.859 hrs.
				= 351.54 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft.	18,018.9		
9. Watercourse slope, s	ft. / ft.	0.00091		
10. Average velocity, V (figure 3-1)	ft. / s	0.487		
11. $T_t = \frac{L}{3600 V}$	hr	10.272	+	0.000 = 10.272 hrs.
				= 616.34 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a	ft ²	230.1		
13. Wetted perimeter, P_w	ft.	55.9		
14. Hydraulic radius, $r = \frac{a}{P_w}$	ft.	4.1		
15. Channel slope, s	ft. / ft.	0.00010		
16. Manning's roughness coeff., n		0.035		
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$	ft. / s.	1.093		
18. Flow length, L	ft.	1,654.9		
19. $T_t = \frac{L}{3600 V}$	hr	0.420	+	0.000 = 0.420 hrs
				= 25.23 minutes
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, and 19)				16.552 hrs
				993.11 minutes
Value used for Analysis (Minimum T_c 0.10 hours)				16.55 hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ W-03
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft)	ft.	300.0		
4. Two-yr 24-hr rainfall, P ₂	in.	4.80		
5. Land Slope, s	ft. / ft.	0.00805		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$	hr	0.462	+	0.000 = 0.462 hrs.
				= 27.73 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft.	15,369.8		
9. Watercourse slope, s	ft. / ft.	0.00101		
10. Average velocity, V (figure 3-1)	ft. / s	0.512		
11. T _t = $\frac{L}{3600 V}$	hr	8.335	+	0.000 = 8.335 hrs.
				= 500.07 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a	ft ²	230.1		
13. Wetted perimeter, P _w	ft.	55.9		
14. Hydraulic radius, $r = \frac{a}{P_w}$	ft.	4.1		
15. Channel slope, s	ft. / ft.	0.00010		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$	ft. / s.	1.093		
18. Flow length, L	ft.	3,726.1		
19. T _t = $\frac{L}{3600 V}$	hr	0.947	+	0.000 = 0.947 hrs
				= 56.80 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		9.743		hrs
		584.60		minutes
Value used for Analysis (Minimum T _c 0.10 hours)		9.74		hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ W-04
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total L ≤ 300 ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P ₂ in.		4.80		
5. Land Slope, s ft. / ft.		0.00876		
6. T _t = $\frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.447	+	0.000 = 0.447 hrs.
				= 26.80 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		585.7		
9. Watercourse slope, s ft. / ft.		0.00519		
10. Average velocity, V (figure 3-1) ft. / s		1.162		
11. T _t = $\frac{L}{3600 V}$ hr		0.140	+	0.000 = 0.140 hrs.
				= 8.40 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		230.1		
13. Wetted perimeter, P _w ft.		55.9		
14. Hydraulic radius, r = $\frac{a}{P_w}$ ft.		4.1		
15. Channel slope, s ft. / ft.		0.00090		
16. Manning's roughness coeff., n		0.035		
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		3.273		
18. Flow length, L ft.		5,956.4		
19. T _t = $\frac{L}{3600 V}$ hr		0.506	+	0.000 = 0.506 hrs
				= 30.33 minutes
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)		1.092		hrs
		65.53		minutes
Value used for Analysis (Minimum T _c 0.10 hours).....		1.09		hrs

Reference: 210-VI-TR-55, Second Ed., June 1986

Worksheet 3: Time of concentration (Tc) or travel time (Tt)

Project: False River By: JMS Date: 3/3/2013
 Location: Pointe Coupee Parish Checked: _____ Date: _____

Check One: Present X Developed _____ W-05
 Check One: T_c X T_t _____ Existing

Notes: Space for as many as two segments per flow type can be used for each worksheet.
 Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c only)

	Segment ID	A	n/a	
1. Surface Description (Table 3-1)		Grass		
2. Manning's roughness coeff., n (Table 3-1)		0.150		
3. Flow length, L (total $L \leq 300$ ft) ft.		300.0		
4. Two-yr 24-hr rainfall, P_2 in.		4.80		
5. Land Slope, s ft. / ft.		0.00340		
6. $T_t = \frac{0.007 (nL)^{0.8}}{(P_2^{0.5} s^{0.4})}$ hr		0.652	+	0.000
			=	0.652 hrs.
			=	39.13 minutes

Shallow concentrated flow

	Segment ID	B	n/a	
7. Surface description (paved or unpaved).....		Unpaved		
8. Flow length, L ft.		2,434.1		
9. Watercourse slope, s ft. / ft.		0.00541		
10. Average velocity, V (figure 3-1) ft. / s		1.187		
11. $T_t = \frac{L}{3600 V}$ hr		0.570	+	0.000
			=	0.570 hrs.
			=	34.19 minutes

Channel flow

	Segment ID	C	n/a	
12. Cross sectional flow area, a ft ²		230.1		
13. Wetted perimeter, P_w ft.		55.9		
14. Hydraulic radius, $r = \frac{a}{P_w}$ ft.		4.1		
15. Channel slope, s ft. / ft.		0.00085		
16. Manning's roughness coeff., n		0.035		
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ ft. / s.		3.190		
18. Flow length, L ft.		3,122.7		
19. $T_t = \frac{L}{3600 V}$ hr		0.272	+	0.000
			=	0.272 hrs
			=	16.32 minutes
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, and 19)		1.494	hrs	
		89.64	minutes	
Value used for Analysis (Minimum T_c 0.10 hours).....		1.49	hrs	

Reference: 210-VI-TR-55, Second Ed., June 1986